

09/977,507.

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Cafe

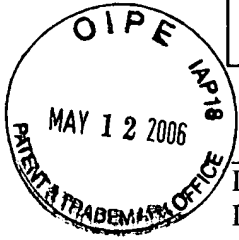
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV809549247US, on the date shown below in an envelope addressed to: Attention: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: May 12, 2006

Signature:

(Sarah J. Buta)

Docket No.: 16159/090001; P5938  
(PATENT)



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Letters Patent of:  
David S. Allison

Patent No.: 7,028,289

Issued: April 11, 2006

For: STREAM OPERATOR IN A DYNAMICALLY  
TYPED PROGRAMMING LANGUAGE

**REQUEST FOR CERTIFICATE OF CORRECTION  
PURSUANT TO 37 CFR 1.322**

Attention: Certificate of Correction Branch  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Certificate  
MAY 17 2006  
of Correction**

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted errors in the drawings which should be corrected.

On the Coversheet:

A drawing was erroneously omitted. Applicant respectfully requests a drawing (e.g. Figure 12) be inserted on the bottom of the coversheet.

In the Drawings:

Please delete Drawing sheets 1 thru 16 and replace with the attached fifteen drawings.

**MAY 17 2006**

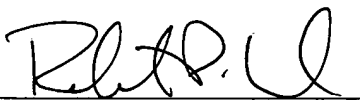
These drawings had been previously submitted by the Applicant. Enclosed for your reference is a copy of the Transmittal of Drawing Correction properly filed on January 20, 2006, which included all 15 of the corrected drawings. Accordingly, Applicant asserts errors were not in the application as filed by applicant; accordingly no fee is required.

Transmitted herewith is a proposed Certificate of Correction effecting such amendment. Patentee respectfully solicits the granting of the requested Certificate of Correction.

Applicant believes no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 16159/090001 from which the undersigned is authorized to draw.

Dated: May 12, 2006

Respectfully submitted,

By   
Robert P. Lord  
Registration No.: 46,479  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010  
(713) 228-8600  
(713) 228-8778 (Fax)

MAY 17 2006

**UNITED STATES PATENT AND TRADEMARK OFFICE  
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 7,028,289  
APPLICATION NO. : 09/977,507  
ISSUE DATE : April 11, 2006  
INVENTOR(S) : David S. Allison

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Coversheet:

A drawing was erroneously omitted. Applicant respectfully requests a drawing be inserted on the bottom of the coversheet.

In the Drawings:

Please delete Drawing sheets 1 thru 16 and replace with the attached fifteen drawings.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV809549247US, on the date shown below in an envelope addressed to:  
Attention: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: May 12, 2006

Signature:  (Sarah J. Buta)

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Robert P. Lord  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010

1

MAY 17 2006

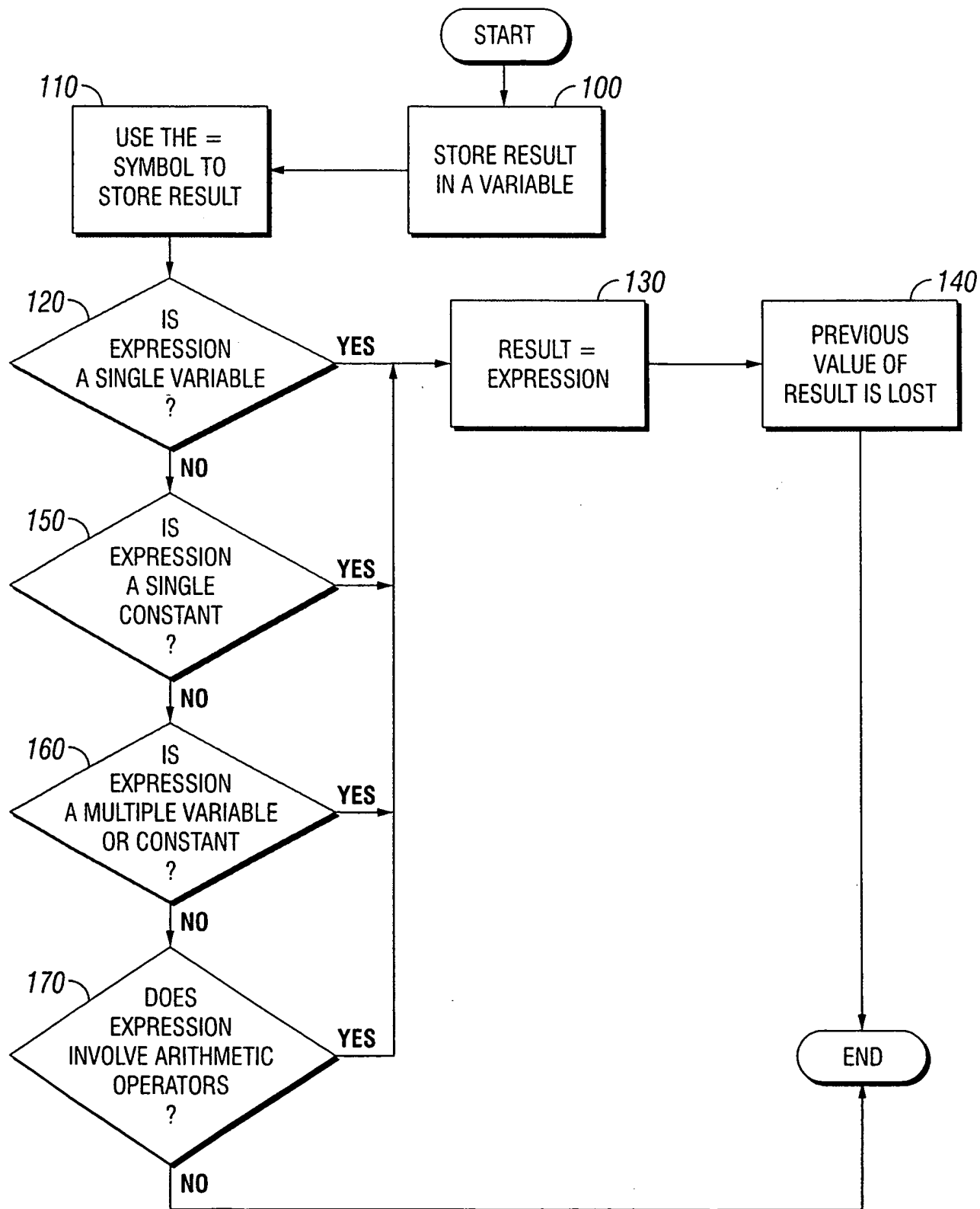


FIG. 1

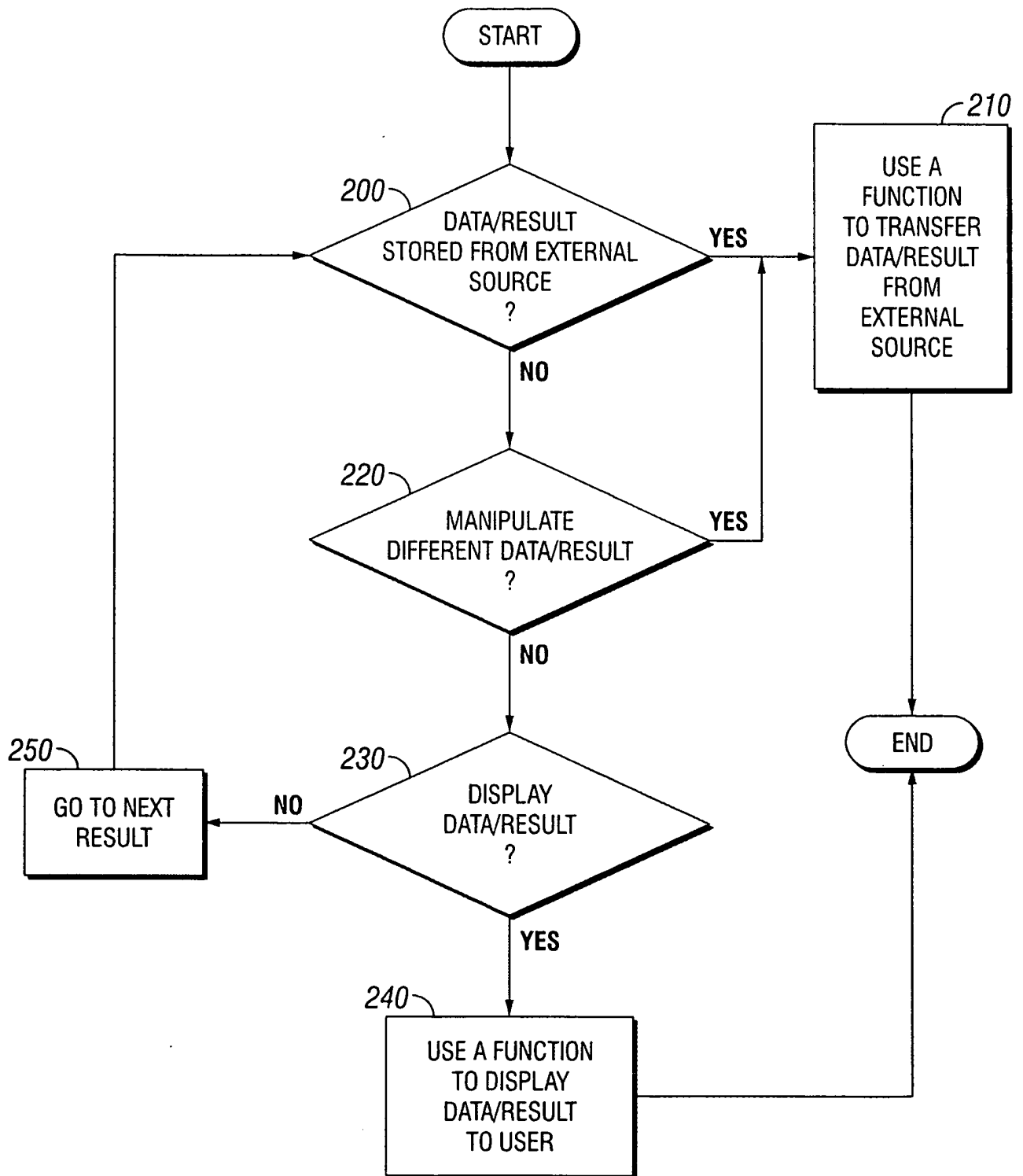


FIG. 2

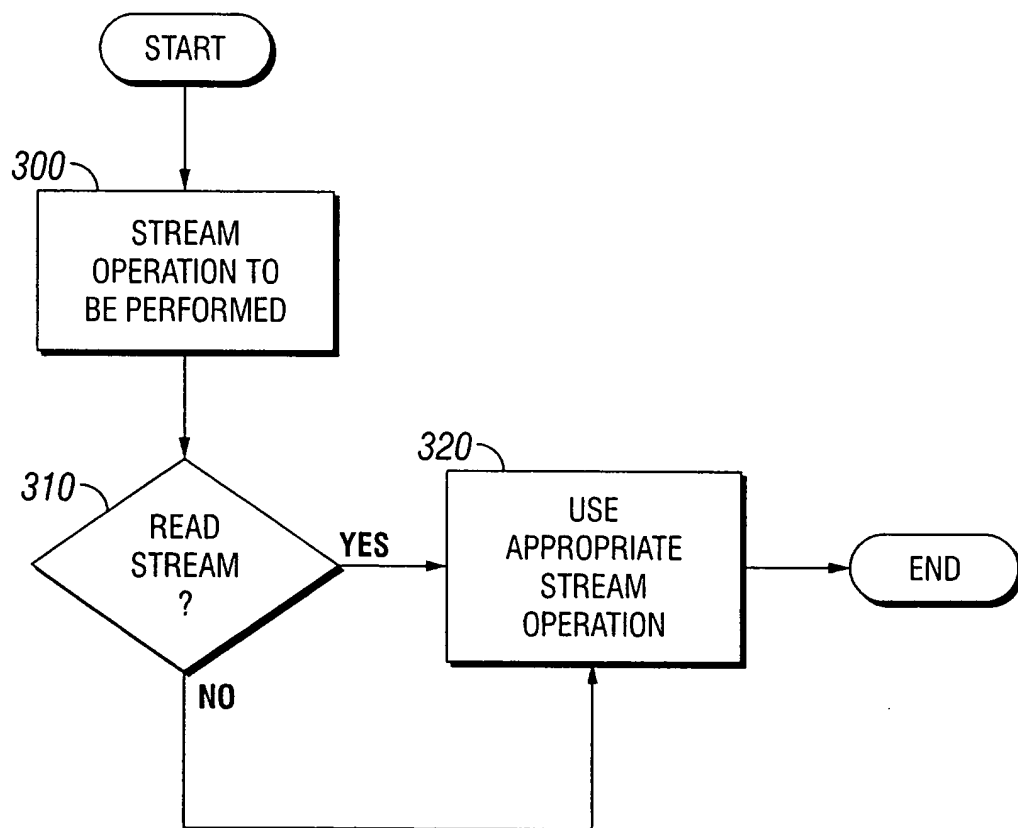
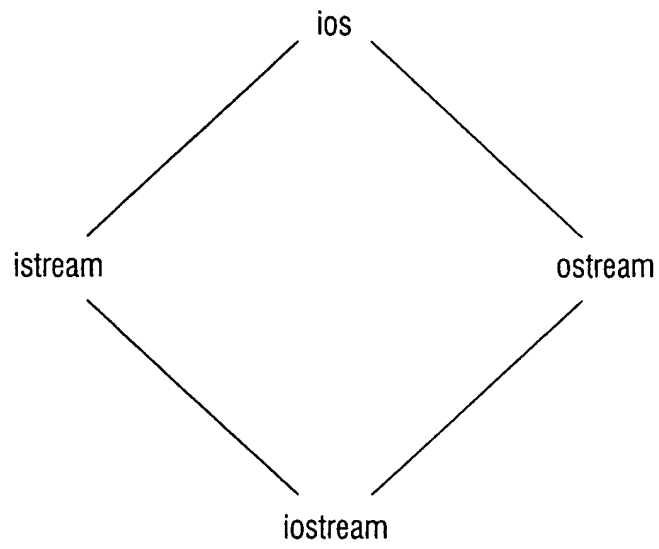
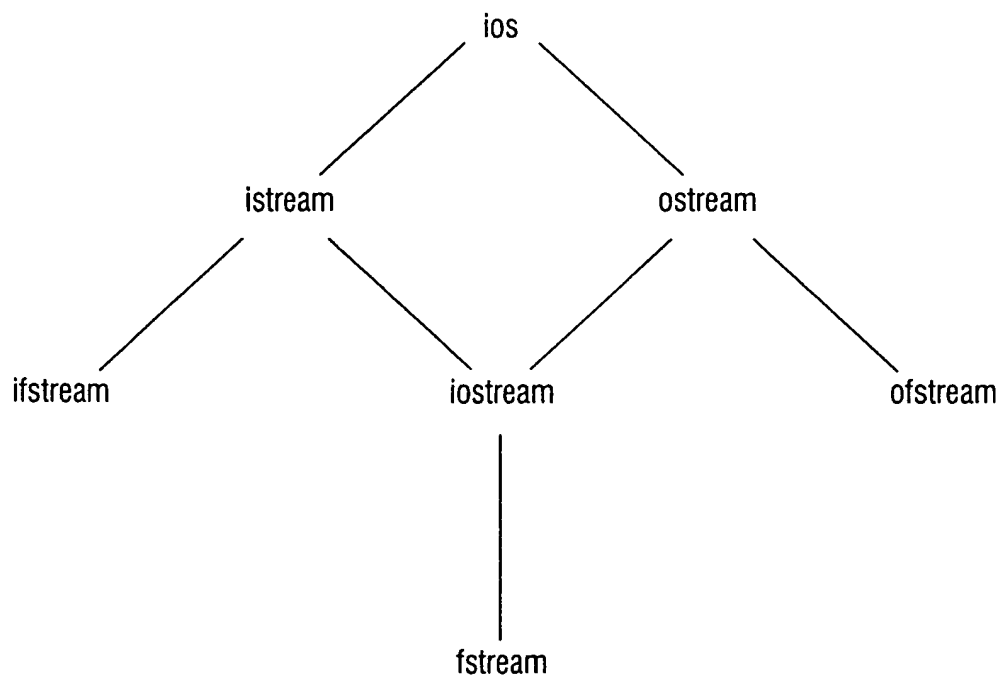


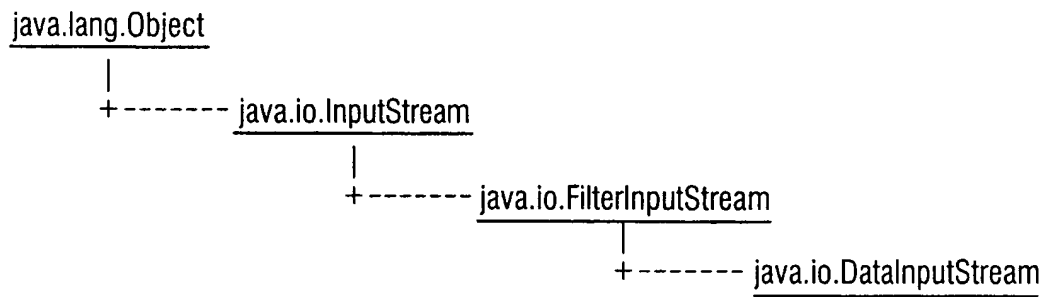
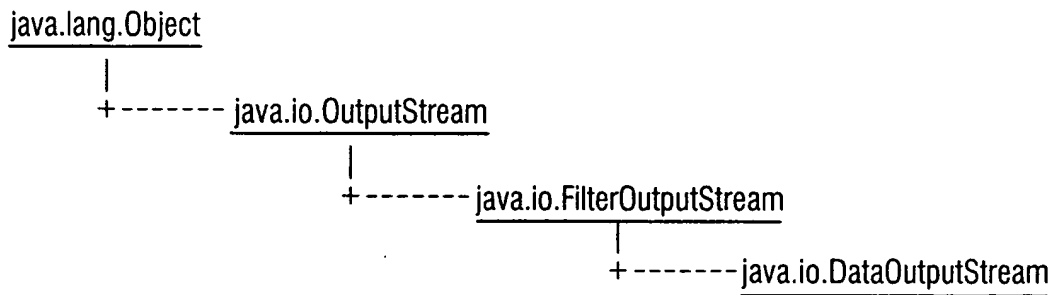
FIG. 3



**FIG. 4A**



**FIG. 4B**

**FIG. 5A****FIG. 5B**

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Function	Purpose
openin (filename)	Open the named file for input
openout (filename)	Open the named file for output
openup (filename)	Open the names file for update(reading and writing)
openfd (fd)	Open the integer file descriptor as a stream
open (filename, mode)	Open the named file with the given integer mode

**FIG. 6A**

Function	Meaning
Network.open (addr,port)	Open an active network connection (TCP)
Network.openServer (addr,port, type)	Open a passive network connection (TCP or UDP)
Network.lookupName (name)	Consult a naming service to convert a network name to an address
Network.lookupAddress (ipaddr)	Consult a naming service to convert an integer IP address into a host name
Network.accept ()	Wait for and accept an incoming connection
Network.openSocket ()	Open a UDP client socket for sending datagrams
Network.send (socket, addr, port, buffer)	Send a UDP datagram to the given socket. The addr and port specify the recipient. The buffer is the string to send
Network.receive (socket, var addr, var port, maxbuffer = 4096)	Wait for an incoming UDP datagram. Blocks until a datagram is received, then returns the data as a string. Also sets the addr and port to the sending address. The maxbuffer argument specifies the max size of data that can be received
Network.peek (socket, var addr, var port, maxbuffer = 4096)	As receive, but don't extract the data from the network. A call to receiver() will read the data.
Network.formatIPAddress (addr)	Build a string of the form n.n.n.n out of an integer IP address.

**FIG. 6B**

<b>Data type</b>	<b>Reading</b>	<b>Writing</b>
integer	Decimal integer converted to binary	Decimal interger
string	Whole line read - terminated by line feed character which is discarded	Characters written to stream
real	ASCII for real value	Written as ASCII
char	Single character	Single character
vector	Each line of file appended to vector - line feed is retained	Each element written
map	cannot read	Elements written as first = second
enumeration constant	cannot read	Name of enumeration constant

**FIG. 7**

<b>Operation</b>	<b>Result</b>
close (stream)	The stream is closed.
select (stream, timeout)	Returns 1 if there is data waiting to be read from stream. Times out after timeout microseconds.
eof (stream)	Returns 1 if the stream is at the end of file.
flush (stream)	Flush the data remaining in the stream buffers.
getchar (stream)	Read a single character from the stream. Returns the character read.
getbuffer (stream)	Read all the available characters in the stream buffer. Returns a string containing all the characters.
availableChars (stream)	Returns the number of characters in the buffer.
setStreamAttribute (stream, attr, value)	Set the value of a stream attribute.
rewind (stream)	Rewind the stream to the start.
seek (stream, offset, whence)	Move to a new position in a seekable stream.

**FIG. 8**

Output type	Input type	Operation
<b>integer</b>	integer	copy left to right
	real	real converted to integer
	string	string converted to integer if possible, 0 otherwise
	vector	first element converted to integer
	map	first element converted to integer
	char	converted to integer
	block	integer set to address
	enumconst	index into enumeration
	object	call toInteger( ) if present, otherwise address of object
	stream	one integer read from stream
<b>real</b>	integer	converted to real
	real	copied
	string	string converted to real if possible, 0.0 otherwise
	vector	first element converted to real
	map	first element converted to real
	char	converted to integer then real
	block	converted to integer then real
	enumconst	converted to integer then real
	object	toReal( ) called if present, error otherwise
	stream	one floating point number read from stream
<b>string</b>	integer	converted to string
	real	converted to string
	string	copied
	vector	each element appended to string
	map	each element appended to string
	char	converted to string
	block	name of block
	enumconst	name of constant
	object	toString( ) called if present, <u>blockname@address</u> if not
	stream	one line read from stream
<b>char</b>	integer	truncated to 8 bits
	real	runtime error
	string	first character in string
	vector	first element converted to char
	map	first element converted to char
	block	first character of name
	enumconst	'A' = first const, 'B' = second, etc
	object	toChar( ) called if present, error if not
	stream	one char read from stream

FIG. 9A

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Output type	Input type	Operation
<b>vector</b>	object	toVector( ) called if present, otherwise object appended to vector
	anything	appended to vector
<b>map</b>	object	toMap( ) called if present, otherwise appended
	anything	appended as {x =x}
<b>function</b>	scalar	function called with single argument
	vector	function called once for each element. Element passed as parameter
	map	Function called for each element. Function has to arguments for left and right of map pair.
	stream	function called for each line of input
<b>thread</b>		like function
<b>class</b>		like function only new object created for each
<b>package</b>		like class
<b>enum</b>		runtime error
<b>enumconst</b>		runtime error
<b>object</b>		runtime error
<b>stream</b>	integer	converted to decimal character sequence
	real	converted to floating point character sequence
	string	each character written
	char	single character written
	vector	each element written
	map	each element written as left = right
	block	block name written
	enumconst	name of constant written
	object	"object" + address written
	stream	stream copied

FIG. 9B

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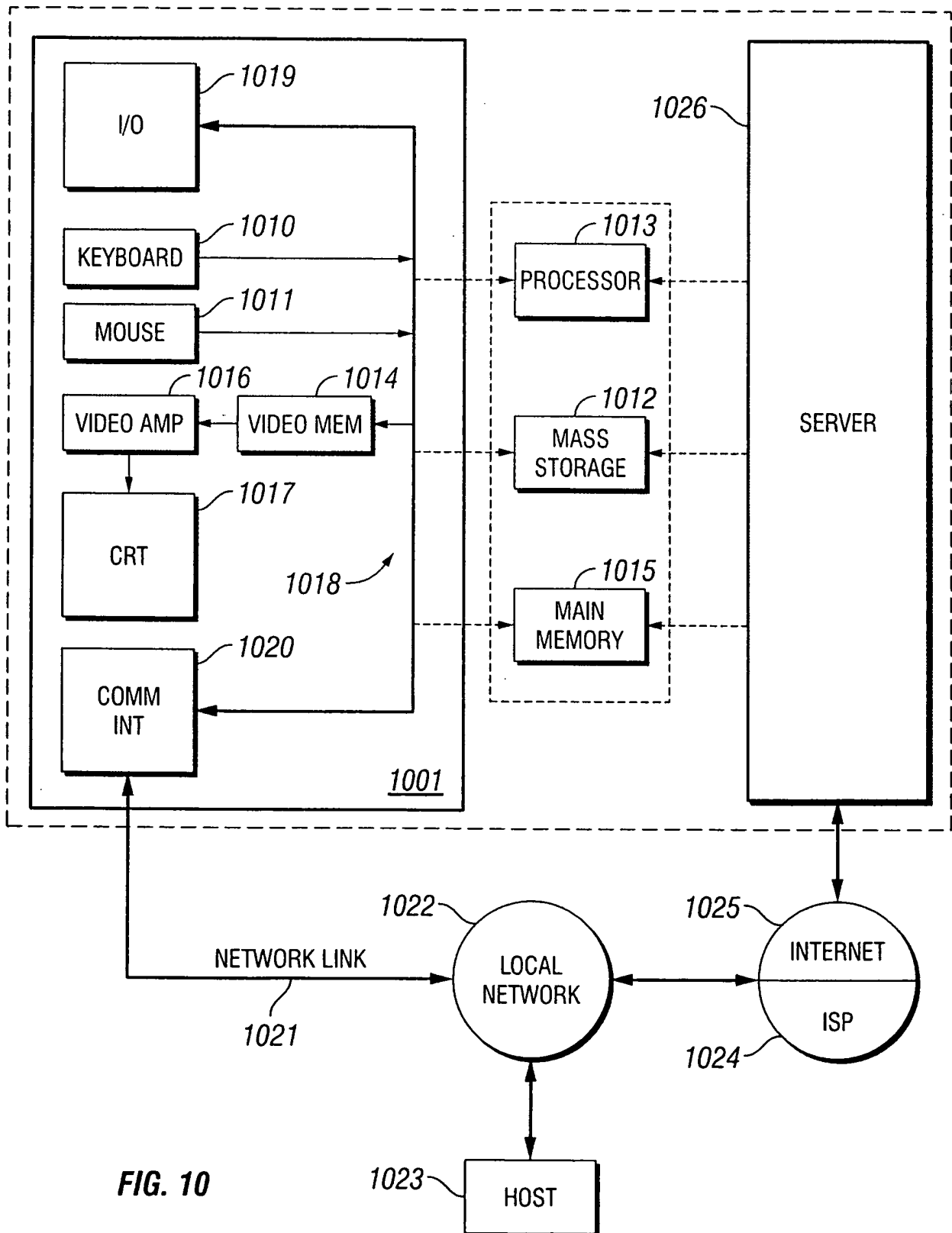


FIG. 10

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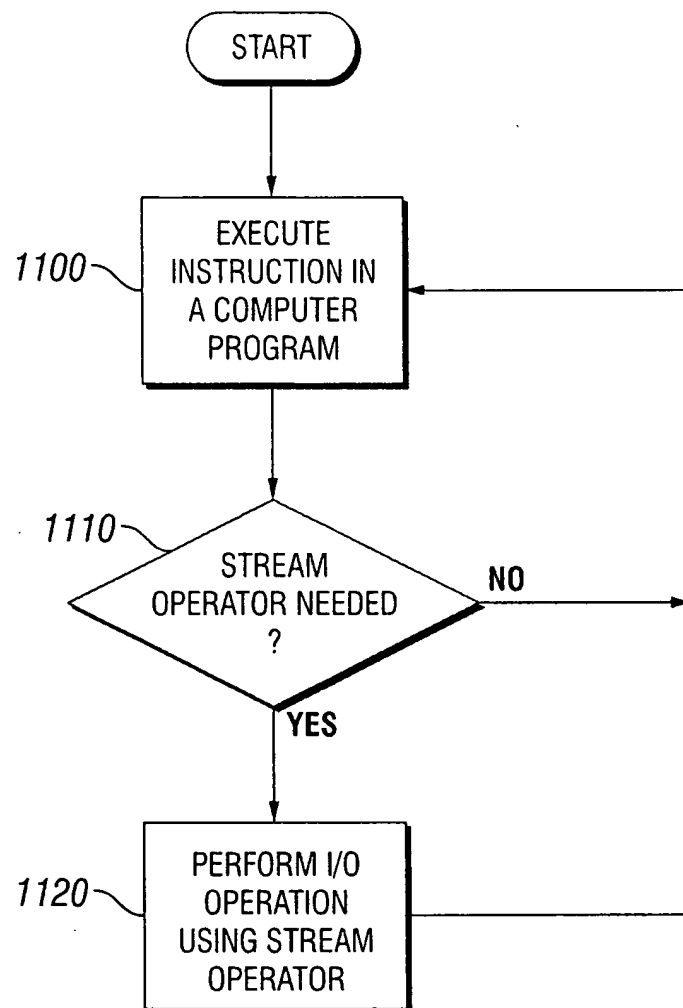


FIG. 11

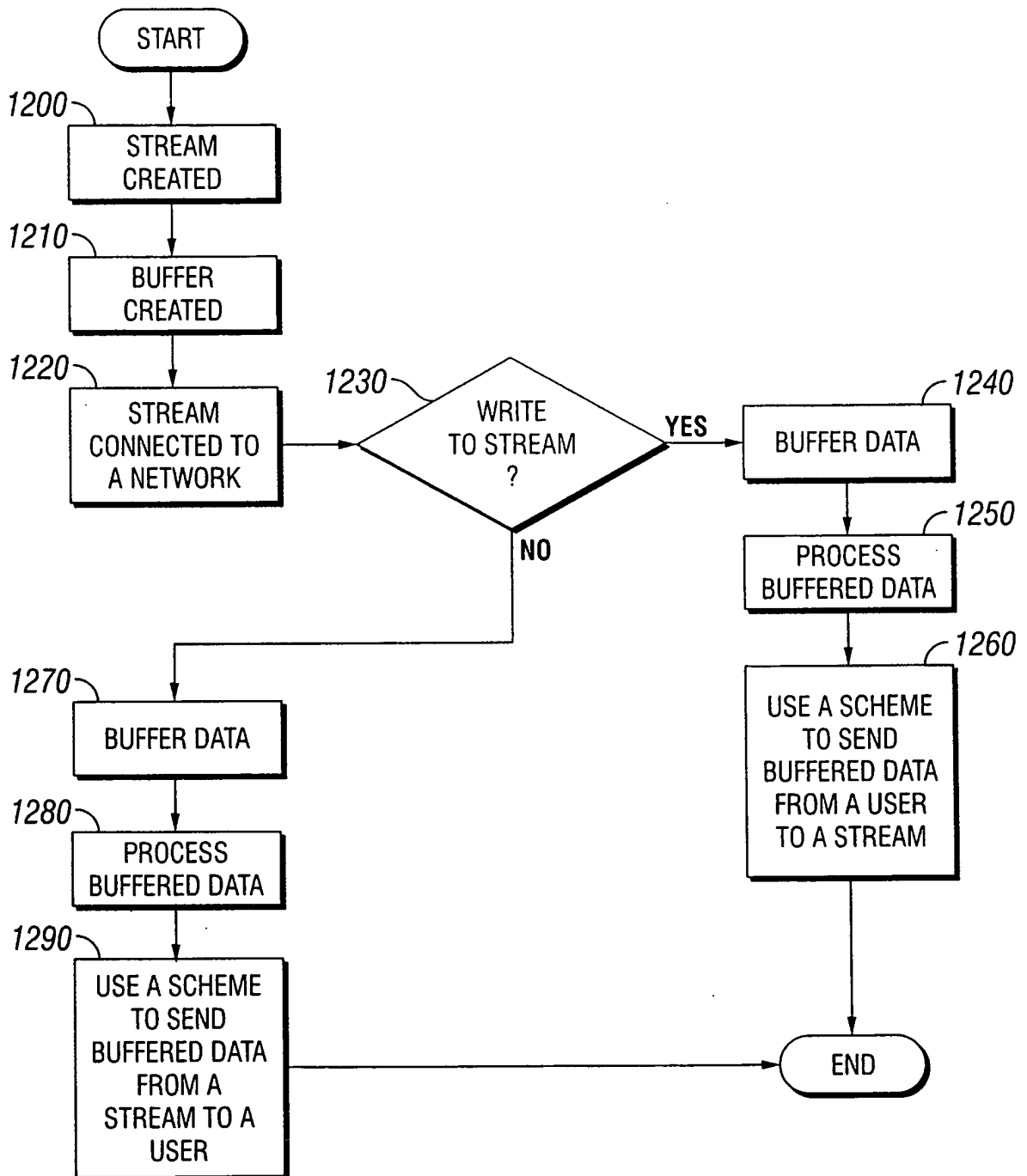


FIG. 12

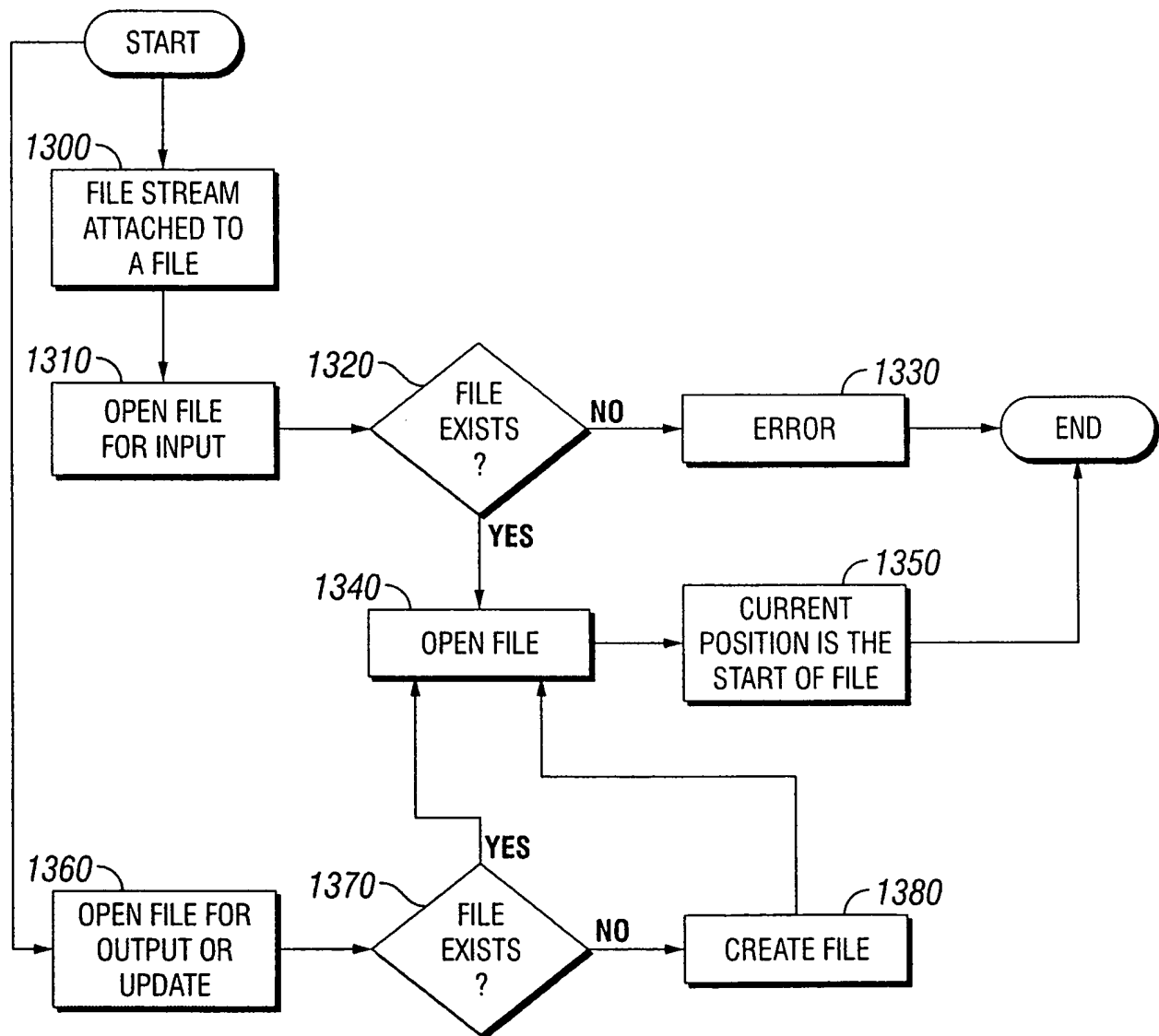


FIG. 13

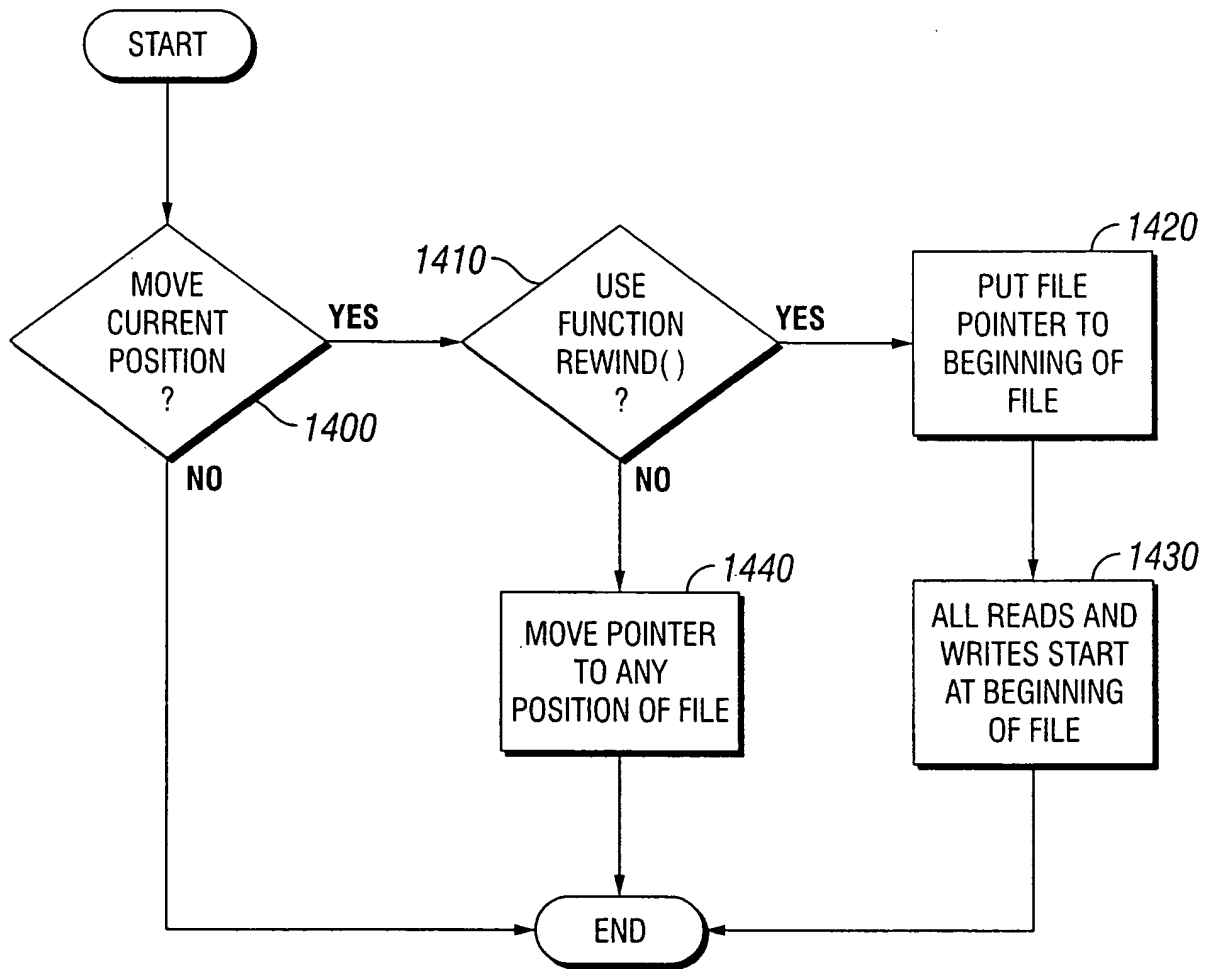


FIG. 14

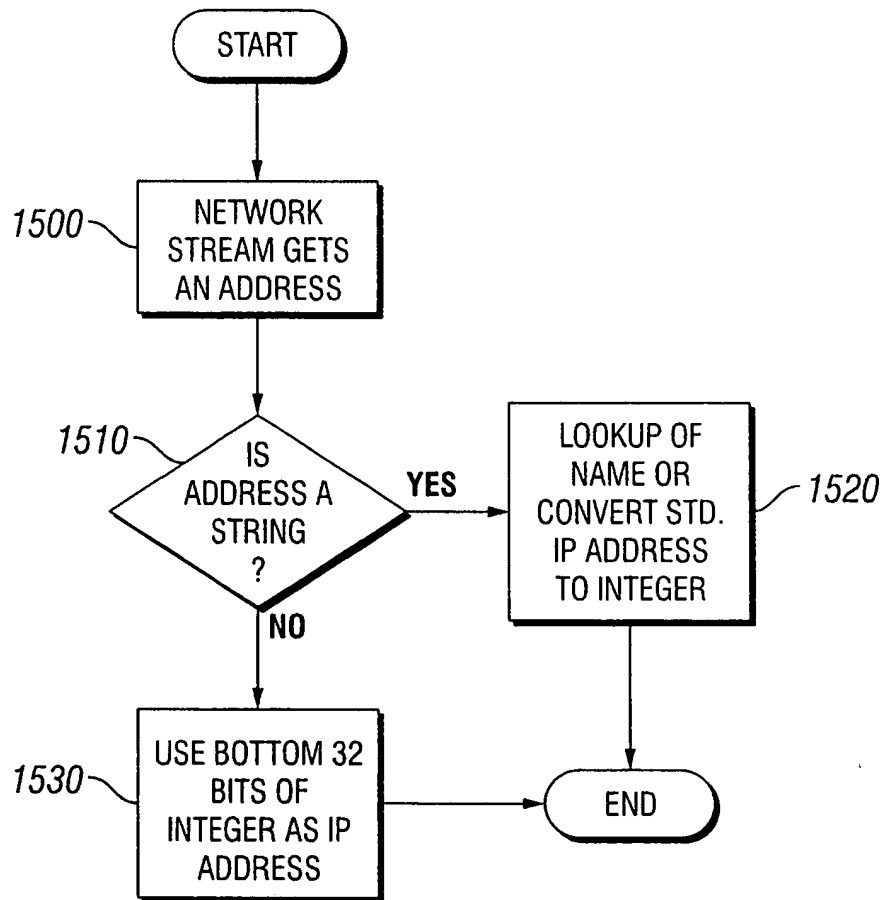


FIG. 15



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Dated: January 20, 2006

Signature:

*Brenda C. McFadden*  
(Brenda C. McFadden)

Docket No.: 16159/090001; P5938  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
David S. Allison

Application No.: 09/977,507

Confirmation Number: 3875

Filed: October 12, 2001

Art Unit: 2124

For: STREAM OPERATOR IN A DYNAMICALLY  
TYPED PROGRAMMING LANGUAGE

Examiner: T. D. Ingberg

**TRANSMITTAL OF DRAWING CORRECTION**

Office of Patent Publication  
Attn: Joshua D. Chase  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notice Regarding Drawings mailed on December 19, 2005, please find enclosed one set (fifteen sheets, nineteen figures) of corrected drawings for filing in the above-identified patent application. The enclosed drawings correct the informalities noted in the aforementioned notice.

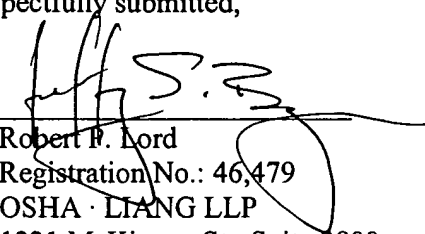
Favorable consideration of the enclosed drawings is respectfully requested.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0591, under Order No. 16159/090001 from which the undersigned is authorized to draw.

Dated: January 20, 2006

Respectfully submitted,

By



Robert P. Lord  
Registration No.: 46,479  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010  
(713) 228-8600  
(713) 228-8778 (Fax)